How to Run AppleWorks on PC and Macintosh Computers

by Daniel Sczygelski

Have you ever wanted to use AppleWorks away from your desk at home? Have you ever envied owners of notebook computers who can take their trusty silicon friends wherever they wish? Have you ever wanted to run AppleWorks on an IBM-compatible or Macintosh at work?

Well, now you can run Apple-Works without an Apple II, and have portability too! The key is to use an "emulator", a program that lets you run Apple II software on a non-Apple system.

Two programs from COMPUTER: applications do just that. One (][in a PC) converts an IBM PC or clone into a 128K Apple IIe work-alike. The other (][in a Mac) works on a Macintosh.

How well they work depends on your personal standards. Neither is perfect, but both let you run AppleWorks.

Running AppleWorks on MS-DOS Systems

The $149.95][in a PC package includes a 720K 3.5-inch MS-DOS disk with the][in a PC program, and a 5.25-inch Apple II disk that you can use to transfer Apple II disk images to and from the PC. The 62-page manual explains most of what you need to get things going. The software is not copy-protected.

Unfortunately, COMPUTER: applications is no longer updating][in a PC; version 1.8 is current, and the program runs under DOS, not under Windows. *[Ed: See the end of this article for special NAUG member discounts on][in a PC and][in a Mac.]*

][in a PC requires an MS-DOS compatible PC with at least 512K of RAM and VGA graphics. 640K allows for less disk access and slightly better performance.

You use a serial cable to transfer

the disk images containing your programs and data to your PC; Apple IIe users need a Super Serial Card in slot 2. Apple IIc and IIGS users can use their built-in modem port to transfer data to the PC.
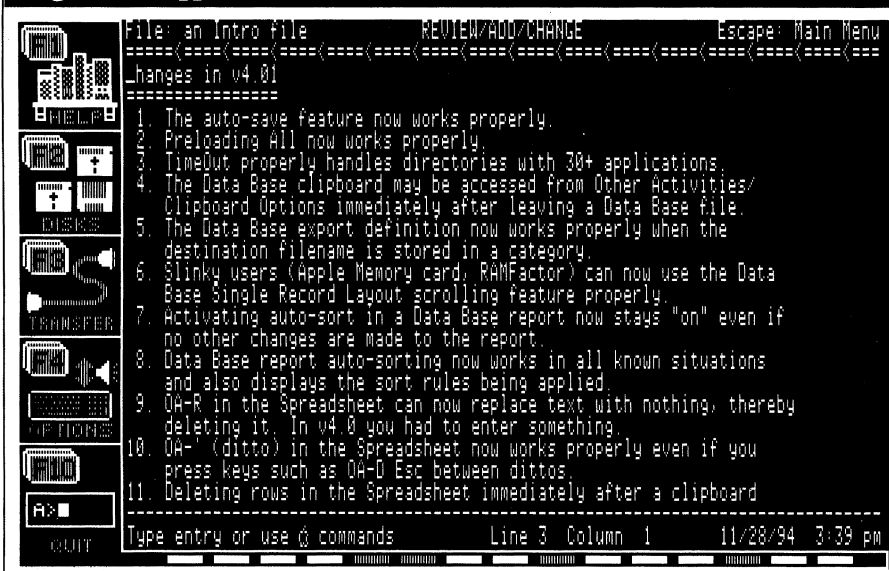
Overall Operation

Getting started with][in a PC is neither quick nor easy, primarily because the][in a PC emulator

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Figure 1:][in a PC Screen

cannot read ProDOS disks. You must transfer your Apple II programs and data to the PC.

To do this, you connect your PC and Apple II together with a serial cable and then use the software provided with][in a PC to create disk images of your programs and data. (COMPUTER:applications sells cables for $19.95, but I used the cable that came with CrossWorks.) Once you have your disk images transferred, you can copy files from the disk images to a ProDOS partition on the PC's hard drive.

At first I had problems getting my Apple II and MS-DOS computers to communicate, but a call to COMPUTER:applications solved the problem. (I had to issue the DOS command "MODE COM1:96,N, 8,1,P" before running][in a PC. That was not mentioned in the manual.)

However, the manual offered other suggestions to solve potential transfer problems, including turning off your VGA screen blanker and mouse driver that might use interrupts. (The best way to eliminate these drivers is to create a bootable MS-DOS system disk and use that disk instead of booting from a hard drive when you want to transfer data.)

Once you get all that settled, data transfer can take place at 9,600 or 19,200 bits per second. It took me approximately 18 minutes to transfer an 800K disk from a IIe to a PC at 19,200 bits per second. A 5.25-inch disk took just over three minutes.

You can also reverse the process to transfer files from your PC back to your Apple II.

After you transfer your programs and data you can create, edit, and print documents with AppleWorks.

The Emulated Apple

Running Apple II software under][in a PC requires some re-thinking. For example,][in a PC has you "insert" disk images into five imaginary disk drives (four 5.25-inch or 3.5-inch drives assigned to slots 5 or 6 and a "hardfile") represented by large icons on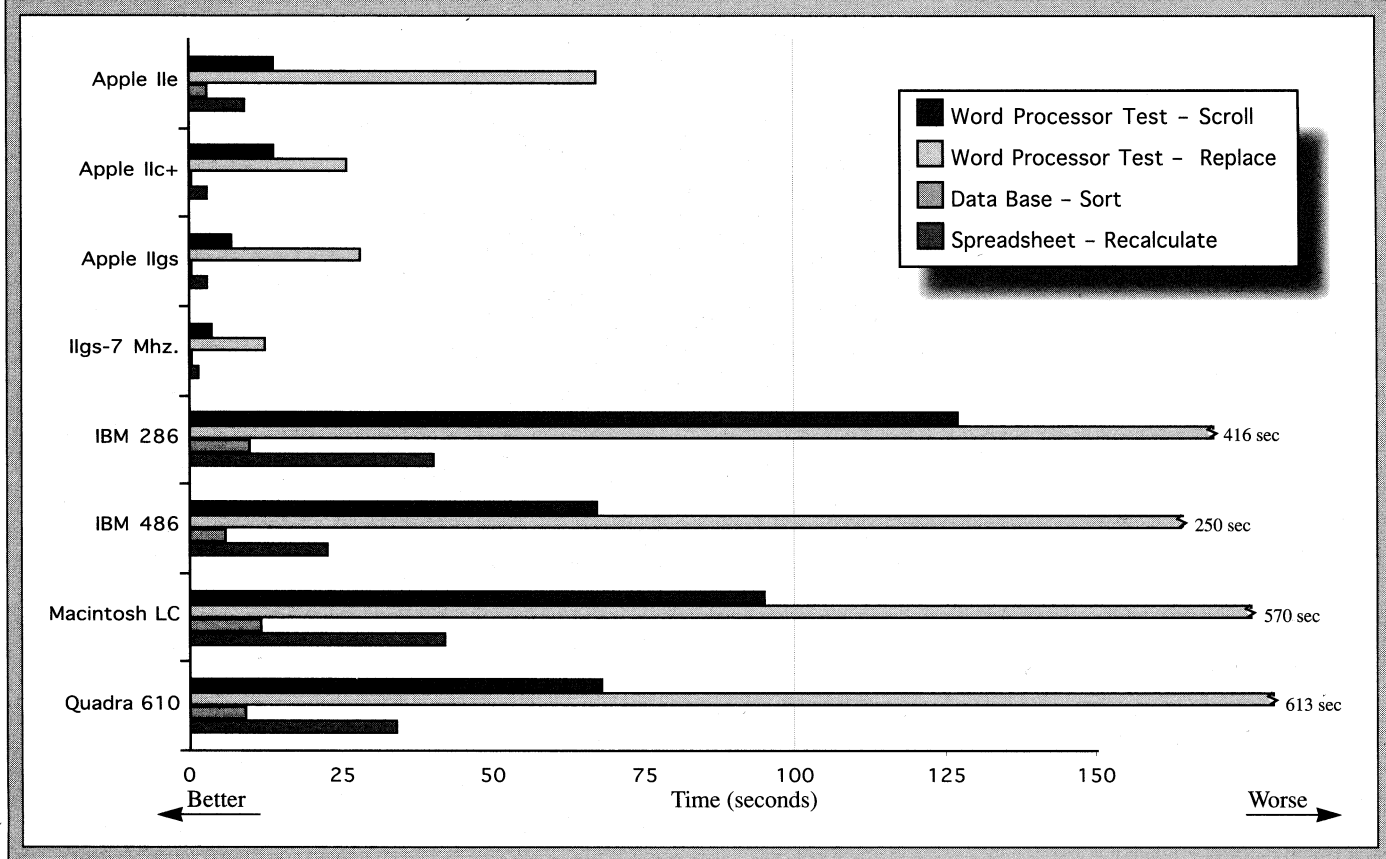 the VGA graphics screen (see *Figure 1*). The hardfile emulates a hard disk of up to eight megabytes assigned to slot 7. You can copy files from disk images to the hardfile and run them from there, or you can load and run programs directly from the disk images. You can store the disk images on a MS-DOS floppy disk or on the PC hard drive.

When you launch][in a PC from the DOS prompt, you must tell it to boot into the hardfile or to a particular floppy image by adding the name of the disk to the end of the command that runs][in a PC (for example, you would type "IIINAPC AW"). Otherwise][in a PC will complain that you have no disks in your drives. You must then "insert" a disk image and reboot your "IIe".

It also takes some time to get used to using the PC keyboard with AppleWorks.][in a PC uses function keys F1 through F4 to access the features of the program. (F1 provides a set of help screens. F2 lets you insert and remove disk images and create a new disk image. F3 takes you to the Disk Transfer screen where you send disk images back and forth to the Apple II. F4 displays an Option screen that controls the modem settings, the hardfile size and setup, the sound, and other parameters. The F10 key quits][in a PC and returns to MS-DOS.) A small set of icons along the left side of the screen reminds you of the purpose of each function key (see *Figure 1*).

Unfortunately, many keys on the PC keyboard do not match the keyboard on the Apple II. The left

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Figure 2: AppleWorks 4.02 on Different Systems

Word Processor Test – Scroll
Word Processor Test – Replace
Data Base – Sort
Spreadsheet – Recalculate

Apple IIe
Apple IIc+
Apple IIgs
IIgs-7 Mhz.
IBM 286 — 416 sec
IBM 486 — 250 sec
Macintosh LC — 570 sec
Quadra 610 — 613 sec

0   25   50   75   100   125   150
Better   Time (seconds)   Worse

and right ALT keys on the PC keyboard serve as the Open and Closed Apple keys respectively. The Backspace key on a PC looks like the Delete key on an Apple II but works like the Left Arrow key. And the PC keyboard lacks a Reset key; you press an ALT key and a function key to reset the simulated IIe.

You simulate a joystick by pressing the Shift keys on both ends of the Space Bar, and the left and right ALT keys serve as the joystick buttons. In general, the keyboard differences were hard for me to get used to.

Finally, one of the differences works in favor of the emulator: Your][in a PC-equipped system can have up to five disk drives on-line simultaneously. That gives you more storage options than you find on most 128K Apple IIe systems and saves time and effort if you still use floppy disks.

Incomplete Compatibility

Unfortunately, Apple II compatibility is incomplete under][in a PC. For example, the program does

not support Double Hi-Res graphics, so many Apple II program will not run under this emulator. Mousetext support is incomplete; if your program uses mousetext, your screen may look funny. Some Apple II programs *[Ed: including AppleWorks 5]* will tell you that you need an enhanced IIe and will not run under the emulator.

Although AppleWorks 4.x and earlier do not require an enhanced IIe, certain Timeout programs do. Any AppleWorks enhancements that use Double Hi-Res graphics (Timeout Graph, SuperFonts, Paint, and Page Preview) will not work correctly. (For example, I could get SuperFonts to print correctly, but could not preview my work on the screen. Timeout Graph would not display or print properly.)

Older software that uses Single Hi-Res graphics worked well under the emulator. For example, New Print Shop worked correctly after I used trial and error to find a compatible printer interface setting. (I used the Practical Peripherals' Printerface in slot 1.)

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][in a Mac: A Macintosh Alternative

][in a Mac is COMPUTER: applications' $149.95 program that emulates an Apple IIe on any Macintosh 512K or later system.

The][in a Mac package includes an 800K Macintosh program disk and a 5.25-inch Apple II disk that you use to transfer disk images and files between your Apple II and Macintosh systems. The software is not copy protected. An on-line help system supplements the 50 page user manual.][in a Mac is no longer being updated by COMPUTER:applications; the most recent version is 2.53.

][in a Mac includes an old version of the Macintosh operating system that will not boot current Macintosh computers. The best way to run the emulator is to boot your Mac as you normally would and then run][in a Mac from your hard drive or from a floppy disk.

Modifying Your System

][in a Mac assumes that you have a black and white system; you must set the Monitors Control Panel to "black and white" before launching the program. Owners of 68040-equipped systems must disable the '040 cache and re-start their Macintosh before launching][in a Mac. I did not test the software on the new Power Macintosh systems.

The][in a Mac screen displays an Apple][monitor, simulated disk drives, a printer, clock, joystick, and modem (see *Figure A*). A Macintosh Menu Bar appears at the top of the screen. You activate the joystick from the Menu Bar; the mouse controls its movement. System 7 users can switch to other Macintosh applications while running the emulator.

The clock, the simulated on-screen printer that shows your document in miniature as you print, and the status

Figure A: The][in a Mac Screen

lights on the modem make][in a Mac fun to use. The on-screen disk drive lights work when you access the drive.

][in a Mac can read and write ProDOS 3.5-inch disks, although this feature does not work correctly under System 7. Installing Apple's ProDOS File System extension fixes the problem. You can also solve the problem by launching Apple File Exchange (AFE) before inserting the ProDOS disk and switching back to][in a Mac after your computer recognizes the disk. *[Ed: The latest versions of Apple File Exchange and ProDOS File System are on NAUG's Macintosh Transfer Disk, which costs $6 plus $2 s/h from NAUG.]*

Unlike][in a PC,][in a Mac lets you use your Macintosh's memory to simulate an auxiliary slot card (like a RamWorks card) in an Apple II. However,][in a Mac does not use this memory efficiently; you may have to set aside more than a megabyte of Macintosh memory to get enough Apple II memory for AppleWorks to pre-load all its modules.

][in a Mac assigns the Apple II disk drives on the screen to slots 5 and 6.

You can assign the internal Macintosh 3.5-inch drive to slot 6 and an external 3.5-inch drive to slot 5.

If you do not have a 3.5-inch disk drive on your Apple II, you are limited to 5.25-inch disk images that you must transfer from your Apple with a serial cable that is not included in the][in a Mac package. (Unlike][in a PC,][in a Mac cannot simulate a ProDOS hard disk; you must use floppy disk images for your program and data files.) Under System 7, you must switch back to the Finder to remove a disk from the internal 3.5-inch drive; a command on the Menu Bar lets you remove simulated 5.25-inch disks.

The Apple II screen covers everything but the Menu Bar when your "Apple" is in 80-column mode. That provides good readability. But it hides the disk drives and other icons from view although it does not hinder their operation.][in a Mac displays the small monitor and other Apple II peripherals when you switch back to 40-column mode.

][in a Mac was originally written for a 512K Mac, so the keyboard layout has some quirks. The biggest prob-

lem is that][in a Mac does not use the Command (Open-Apple) and Option (Solid-Apple) keys. Instead you press Option-O for Open-Apple and Option-S for Solid-Apple followed by the other half of the Apple II keystroke you desire. For example, to save a file in AppleWorks you press Option-O then S.

The Delete Key on the Macintosh keyboard does not work as expected with][in a Mac; you simulate this keypress by pressing Option-D.

Finally, the Escape Key on many Macs is near the Space Bar instead of in the upper left hand corner as most Apple II users expect. I often get my fingers tied up in knots because of these changes.

Other Differences

Although][in a Mac supports some mousetext characters, the program emulates an unenhanced Apple IIe. Like][in a PC, it does not support Double Hi-Res graphics. Even inverse text on the 80-column screen is garbled. (I noticed this when running ProSEL, which otherwise works fine.)

As indicated earlier, you must run][in a Mac in black and white, so you will not see any colors in programs like New Print Shop or in games. (New Print Shop would not run properly on][in a Mac anyway. The screen often got jumbled and it did not print properly. Programs like ShrinkIt 3.4 and Copy II+ 9.1 also would not run. I was more successful getting older versions of my programs to run under this emulator.)

Conclusions

][in a Mac can run AppleWorks and many other older Apple II programs on Macintosh computers. That lets you use a Macintosh PowerBook as a portable Apple II. But the different keystrokes, slow speed, lack of Double Hi-Res graphics, and lack of support for a hard drive make it difficult to recommend][in a Mac for more than occasional use.

Performance

Emulation programs often slow down a computer, and][in a PC is no exception. *Figure 2* summarizes the results of my tests that compared the speed of AppleWorks 4.02 on different systems. I tested two MS-DOS computers (a 12-megahertz 80286 and a 50-megahertz 80486DX PC clone), four Apple II systems (a 128K Apple IIe, a 1-megabyte IIc+, a 4-megabyte IIGS at "Fast" speed, and a 4-megabyte IIGS equipped with a TransWarp GS accelerator running at 7 megahertz), and two Macintosh computers running][in a Mac (see the sidebar entitled "][in a Mac: A Macintosh Alternative" for a description of this program). The Macintosh Quadra 610 had about 4-megabytes of DA's and other extensions which account for some of its slower performance.

The word processor scrolling test involved scrolling through a 200 line, 16K document by holding the Down Arrow key until I reached the bottom.

The word processor replace test used the Replace Command to replace every instance of the letter "a" with the letter "b" in a document that contained nothing but 600 instances of the letter "a".

The data base test sorted an 18K address data base from A to Z.

The spreadsheet test measured the time it took to recalculate a 17K spreadsheet after I changed the starting value upon which all the calculations were based.

As you can see from *Figure 2*,][in a PC is slow. Even when running on a 50-megahertz 486DX computer,][in a PC is significantly slower then a stock 1.04-megahertz Apple IIe.

Of course, there are reasons for this poor performance. First, the PC is running two programs at once: the][in a PC emulator and AppleWorks. And][in a PC only makes 128K of memory available to AppleWorks. That slows down AppleWorks because the program cannot pre-load program segments into memory and must load each segment as it needs that portion of the program.

The 128K memory limitation also keeps Apple-Works 4 users from running UltraMacros. A 128K IIe is a bare bones system by today's standards. *[Ed: Unlike][in a PC,][in a Mac uses the extra memory in your Macintosh for Apple II emulation.]*

Conclusions

In general, I was disappointed with][in a PC because of its lack of speed, its 128K limit as an Apple II emulator, and it's lack of support for Double Hi-Res graphics.

But the emulator lets you run other software besides AppleWorks, and it lets you transfer data

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Another Apple II-in-a-PC Alternative

AppleWorks users discouraged by the price and limitations of][in a PC should consider SimSystem IIe, a new $50 Apple IIe emulator by American Research, Inc. SimSystem IIe, which emulates an enhanced Apple IIe, runs under MS-DOS on 286 or higher PCs equipped with CGA or better graphics. The program provides full Apple II color on VGA and Super VGA-equipped systems. The author reports that the program works with AppleWorks 3.0, although a bug in version 1.1 kept me from testing that combination at press time.

Unlike][in a PC, SimSystem IIe supports all text and graphics modes available on a 128K Apple IIe including Double High-Resolution graphics. SimSystem even provides a powerful programming environment and extensive debugging tools that let you develop Apple II software on your PC.

The author is working to increase the memory available to Apple II users and the speed of the emulator. However, the speed of the current version is comparable to][in a PC, which can best be described as glacial even when running on a 50-megahertz 486DX system. But unlike][in a PC, SimSystem IIe is a developing product, not one left untouched by its authors for the past few years.

SimSystem IIe, which comes on a 3.5-inch MS-DOS disk, includes a comprehensive and well-written manual that describes the operation of the program and provides technical information for MS-DOS users unfamiliar with the Apple IIe environment.

NAUG members interested in SimSystem IIe should try the demonstration version in the NAUG Public Domain Library. Like the commercial product, NAUG's SimSystem IIe Demo Disk requires a 286 or faster PC equipped with CGA or better video and a 3.5-inch disk drive. The disk, which costs $6 plus $2 s/h, is also available on the Electronic Forum, NAUG's bulletin board service, and the NAUG areas on CompuServe and GEnie.

For more information about SimSystem IIe or to encourage its developer, contact American Research Inc., 2120 Deercreek Road, Simi Valley, California 93065.

between your PC and Apple environments.

As a result, I consider][in a PC an acceptable alternative when you have to travel. I carry an MS-DOS high density 3.5-inch disk that contains][in a PC, an AppleWorks 800K disk image, and another floppy disk with data files. That makes almost any PC clone a potential AppleWorks station where I can jot down notes and do some work without

wondering where I can find an Apple II. When I get home, I transfer the floppy image back to my Apple II and continue my work.

AppleWorks users have attractive alternatives to][in a PC. For example, SuperWorks is a fast and powerful AppleWorks work-alike that runs on PCs. But there are subtle differences between SuperWorks and AppleWorks that you might find annoying.

Other possibilities exist for running AppleWorks, but they are not portable. A Macintosh LC with a IIe card works well and lets you read and write Pro-DOS disks. A Trackstar board also lets the PC simulate an Apple II, but it is hard to move between machines and it only simulates a 128K Apple.

Finally, you can use an Apple IIc Plus with 1-megabyte of memory and an LCD flat panel display as a portable system. I have such a unit. It works well, but it still requires an AC outlet and the display is not readable in certain lighting situations. Other inexpensive small notebook computers (for example, the Laser PC4) do not let you run AppleWorks, have limited screen displays and other disadvantages.

][in a PC has its place. Its price is steep at $149.95, but it can be an inexpensive option if it runs most of your current software. However, it is not for everyday use unless you have more time and patience then I do. But for traveling where you are unlikely to find an Apple II, it can get the job done.

[ ][in a PC and][in a Mac each list for $149.95. Until April 1, 1995, NAUG members can buy these products for $49.95 (plus $3.50 s/h in North America; $10 s/h outside North America) directly from the developer of the programs. COMPUTER: applications accepts Visa and MasterCard and offers NAUG members a 30-day money-back guarantee on these products.]

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[COMPUTER:applications, 12813 Lindley Drive, Raleigh, North Carolina 27614; (919) 846-1411; Fax: (919) 846-1412.]

AppleWorks 5:
My Favorite Features

by Randy Brandt

One of the developers of AppleWorks 5 describes his favorite documented and undocumented features in this new release of AppleWorks.

AppleWorks 5 is loaded with new features, so I thought you'd enjoy learning about some of my favorites. Since some of these features reflect minor changes to the program, I think you will be surprised at a few of my choices.

Quick Start: Hold down the Open Apple key when you launch the program, and AppleWorks 5 will not pre-load its modules, copy its dictionaries or thesaurus synonyms, load the AfterWork modules, or load the TimeOut applications (except the Utilities). That gets me started faster. I then use the TimeOut Utilities' "Add applications" option to load my other TimeOut applications when I need them.

You can get an even faster start by holding down both the Open and Solid Apple keys when you launch the program. That tells AppleWorks 5 to not load your inits as well. But that means you cannot run most macros.

Clipboard Inverse Text: AppleWorks 5's Open-Apple-H command transfers inverse text to the clipboard. That makes my screen shots flashier in my word processor documents.

Mousetext Support: AppleWorks 5's word processor and data base modules accept mousetext and inverse text. They can even search and replace or set record selection rules for these special characters. Both modules can also print mousetext on ImageWriter II printers.

Default Ruler Editing: AppleWorks 5 lets me set the word processor's default ruler to any possible ruler configuration. I define the defaults with the usual Open-Apple-T Tab Ruler option. No longer do I have to run a macro or load a word processor template to define a customized ruler.

Text File Loading: I love AppleWorks 5's ability to load text files with margins set to zero inches. That makes it easier to read most text files on the screen, especially those with returns at the end of every line. Prior to AppleWorks 5, I had to enter these margin settings manually or with a macro. These formatting operations caused significant delays when I worked with large files.

> " *I think you'll be surprised at some of my choices*"

Spell Check Sensitivity: I like to control the number of words suggested by the spell checker. *[Ed:The more words you display, the more likely you are to find a grossly misspelled word, but the longer the list of words you have to read on the screen.]*

AppleWorks 5 lets me set the spell checker's sensitivity to Normal, QuickSpell, QuickSpell+, or QuickSpell++. These options provide progressively more suggested spellings for a word. (My thanks to Mark Munz for this option, which I adapted from the code he used on his AppleWorks 3 Companion disk.)

QuickMark: I like anything that makes it easier to navigate around word processor documents. So I added a Control-Q command that inserts a Ø (zero) marker in a word processor document. Pressing Control-W ("Where is the QuickMark?") returns

Figure 1: Spreadsheet Cell Memo

```
File: Grade Book I            MEMO EDITOR        Escape: Review/Add/Change
===========A===========B======C=====D======E======F======G======H======I====
  4|                          ================
  5|                          MATH TEST SCORES
  6|                          ================
  7|                                                              Letter
  8|    NAME       TEST 1 TEST 2 TEST 3 TEST 4 TEST 5 TEST 6  AVG. Grade
  9|=========================================================================
 10|Andy             96     98     93     90    100     89   94.3   A
 11|Michelle         98    100     95     90     90     91   94.0   A
 12|███Jack███       95     88     92     89      0      0   60.7   D
 13|Anna             74     88      0
 14|Alan             88     90     99  ┌─────────────────────────────────┐
 15|Billy            88     90     50  │ Jack needs to make up two tests │
 16|Carmen           99    100     79  │ which he missed due to serious  │
 17|Betty            93     88     90  │ illness. Both tests will be taken│
 18|Ronita           99     72     96  │ the day before final exams.     │
 19|Richard          68     88     90  │                                 │
 20|Joan             89     99     78  │                                 │
 21|Teddy            73     50     80  └─────────────────────────────────┘
-----------------------------------------------------------------------------
A12+ (Width:14, Label, Layout-L)
Jack
Enter memo text and press ⌥-Return when done               2056K Avail
```

Figure 2: Mixed Mode Display

```
File: Presidents              VIEW RECORDS        Escape: Review/Add/Change

Selection: All records


Record 4 of 42  (42 selected)
=============================================================================
Name: James Madison                    |  George Washington
Number: 4                              |  John Adams
Political Party: Dem-Rep               |  Thomas Jefferson
Birth Year: 1751                       |  ███James Madison███
Birthdate: March 16                    |  James Monroe
Birthplace: VA                         |  John Quincy Adams
Inauguration Date: 1809                |  Andrew Jackson
Inauguration Age: 57                   |  Martin Van Buren
Year of Death: 1836                    |  William Henry Harrison
Date of Death: June 28                 |  John Tyler
Age at Death: 85                       |  James Knox Polk
Vice President: George Clinton and Elbridge Gerry  |  Zachary Taylor
                                       |  Millard Fillmore
                                       |  Franklin Pierce
                                       |  James Buchanan
-----------------------------------------------------------------------------
Use arrows to select, then press Return
```

Enhanced Find Command: Apple-Works 5's Find and Replace commands can search for Tabs and sticky spaces as part of a find string. They can also match single wildcard characters. Therefore, a search for "b^?b" would match "bob", "bib", and "bub".

Cell Memos: My favorite spreadsheet change is AppleWorks 5's ability to attach memos or notes to a spreadsheet cell (see *Figure 1*). I don't need many of them, but I was frustrated in the past when I wanted to add a simple note to a cell. Now it's as easy as pressing Open-Apple-G, thanks to Dan Verkade who wrote a full-featured memo editor for the program. Dan's editor supports automatic word wrap and a number of editing commands.

Mixed Mode Display: My favorite data base enhancement is the new "mixed mode" feature. While in the single record layout, pressing Open-Apple-M pops up a scrolling list of records showing entries from the current category (see *Figure 2*). As you move the cursor up and down the list, AppleWorks 5 instantly updates the single record data. For example, you can scroll through a list of names and see the addresses and personal information updated on the screen as you move through the list.

Faster Import / Export Lookups: I like anything that speeds up AppleWorks, so I appreciate the program's faster data import and export capability. This feature speeds up cross-file data lookups when your data base or spreadsheet files are in corresponding record order. Here's how:

When the AppleWorks 5 data base looks up data in another data base or spreadsheet file, it starts at the spot where the prior search ended. If the desired data is in the next record or row, the program finds the data immediately. (Compare that with AppleWorks 4 which always searches from the beginning of the file

me to that marker. Think of all the times you would have liked that feature over the years!

Enhanced Split Screen: The word processor split screen command now splits the screen directly above the cursor instead of at a fixed spot. And when I return to a file that was split, it is still divided with the same text displayed as when I left it.

and has to work its way to the desired record or row.) Tester Bob Fischer reports that his sample file that took 160 seconds to import under AppleWorks 4.3 took only 7 seconds with AppleWorks 5!

Printing: AppleWorks 5 includes the first ever software printer buffer that works on any Apple II with any printer.

Fixed Bugs: No programmer likes to release a buggy program, and my work on AppleWorks 5 gave me a chance to fix some long-standing problems in earlier versions of AppleWorks. For example, when printing to a text file from the word processor, every version of AppleWorks inserted page breaks as if you were printing on paper. That resulted in paragraphs getting split by a Return character at the page break. Whether that was a bug or a design flaw, it is one of the dozens of niggling "features" Dan and I fixed in AppleWorks 5.

Conclusion

My final favorite feature of AppleWorks 5 isn't a feature at all, but is something of great importance to me. It is the fact that I was able to work with Dan Verkade on another lengthy project, aided by dedicated testers who sacrificed their time to make the program the best version of AppleWorks we could develop. Those who helped most were Steve Beville, Wally Bradford, Bev Cadieux, Doug Cuff (who also wrote the manual), Bob Fischer, Will Nelken, Chuck Newby, Wayne Sheffield, Terrell Smith, and Steve Weyhrich. Thanks to Bill Carver at Quality Computers, and everyone else who helped in this project.

[Randy Brandt was the project manager for AppleWorks 4 and AppleWorks 5. He lives in Arvada, Colorado with his wife Joanna, five children, and a hamster. He enjoys programming, but prefers playing sports or watching them on TV.]

Happy New Year

— From your friends at the National AppleWorks Users Group

Special Discount on Apple II Hard Drive

Now is the chance for **NAUG** members to buy a unique Apple II hard drive and enjoy a special discount.

The Focus Hard Card is a combination hard drive/controller card that mounts in a peripheral slot inside any Apple IIe or Apple IIGS computer. That makes the drive ideal for schools (you can protect the drive with your standard security systems) and for individuals who want to move their drive between computers.

Until March 1, 1995, **NAUG** members can buy a 120-megabyte Focus Hard Card for $249 (list: $529) plus $15 s/h ($45 s/h outside North America). Parsons Engineering, manufacturer of these systems, will ship the drives in March. The company will not deposit your check until two weeks before it ships your drive. These are cash prices. The company also accepts American Express credit cards with a 3% surcharge and will not charge your card until it ships your drive. No COD orders at this special discount price.

[Parsons Engineering, 5010 Rimhurst Avenue, Covina, California 91724; (818) 966-5538; Fax: (818) 966-5701.]

Corrections

October 1994, Page 25, Figure 7: Change the formula in cell E98 to:

$$\text{@IF(0>=E97,0,E97*.12)}$$

Also make this change to the STUDENT.AID template on the October 1994 issue of **NAUG on Disk**.

November 1994, Page 4: Change all references from "AfterWorks" to "AfterWork". Also note that the AppleWorks 5 printer buffer works with all Apple II computers capable of running the program, including Apple IIc systems.

How Do You Use AppleWorks?

Many **NAUG** members use AppleWorks in unusual and interesting ways. Let us know your applications for AppleWorks and we'll share your story with your fellow **NAUG** members in future issues of the *AppleWorks Forum*.

A Cost Converter Template

by Stan Hecker

Converting between dollars and other currencies is easy; a multiplication formula does all the work. But the process becomes more difficult when you have to convert both currencies and measures. That is the purpose of this month's template. You can create the template with any version of AppleWorks.

When he was vacationing in Canada, Texas resident Jean-Claude Magras found it difficult to convert the cost of gasoline from Canadian to U.S. dollars. The problem was two-fold: As in most countries, gasoline in Canada is dispensed by the liter. The currency exchange rate complicated the calculation.

If you are comfortable with the metric system and you carry a handheld calculator, the conversion is not demanding. But the easiest way to do the conversion is to look up the cost on a printed table (see *Figure 1*). The table tells you that gasoline costing 49 Canadian cents per liter is equivalent to $1.39 (U.S.) per gallon when the exchange rate is $1.34 (Canadian) to $1 (U.S.). The template works with other currencies, so it is equally useful when you plan a fly-and-drive vacation or business trip to London or Tokyo.

Overview

The template contains three sections (see *Figure 2*). Section A (cells B2 through K17) is the data entry area. You enter the currency exchange rate and the price per liter of gasoline in Section A to create the gasoline pricing chart in Section C (cells B20 through N41).

Figure 1: Sample Conversion Chart for Canadian Dollars

"OVERSEAS" FUEL PRICES ADJUSTED TO UNITED STATES DOLLARS PER GALLON
CANADA $ PER LITER OF FUEL

			.47	.48	.49	.50	.51	.52	.53	.54	.55
		1.29	$1.38	$1.41	$1.44	$1.47	$1.50	$1.53	$1.56	$1.59	$1.62
E	U	1.30	$1.37	$1.40	$1.43	$1.46	$1.49	$1.52	$1.55	$1.58	$1.61
X	N	1.31	$1.36	$1.39	$1.42	$1.45	$1.48	$1.51	$1.54	$1.57	$1.60
C	I	1.32	$1.35	$1.38	$1.41	$1.44	$1.47	$1.50	$1.53	$1.55	$1.58
H	T	1.33	$1.34	$1.37	$1.40	$1.43	$1.46	$1.49	$1.51	$1.54	$1.57
A	S	1.34	$1.33	$1.36	$1.39	$1.42	$1.45	$1.47	$1.50	$1.53	$1.56
N		1.35	$1.32	$1.35	$1.38	$1.41	$1.44	$1.46	$1.49	$1.52	$1.55
G	P	1.36	$1.31	$1.34	$1.37	$1.40	$1.42	$1.45	$1.48	$1.51	$1.54
E	E	1.37	$1.30	$1.33	$1.36	$1.39	$1.41	$1.44	$1.47	$1.50	$1.53
	R	1.38	$1.29	$1.32	$1.35	$1.38	$1.40	$1.43	$1.46	$1.49	$1.51
R		1.39	$1.28	$1.31	$1.34	$1.37	$1.39	$1.42	$1.45	$1.48	$1.50
A	U.	1.40	$1.28	$1.30	$1.33	$1.36	$1.38	$1.41	$1.44	$1.47	$1.49
T	S.	1.41	$1.27	$1.29	$1.32	$1.35	$1.37	$1.40	$1.43	$1.46	$1.48
E		1.42	$1.26	$1.28	$1.31	$1.34	$1.36	$1.39	$1.42	$1.45	$1.47
S	$	1.43	$1.25	$1.28	$1.30	$1.33	$1.36	$1.38	$1.41	$1.43	$1.46
		1.44	$1.24	$1.27	$1.29	$1.32	$1.35	$1.37	$1.40	$1.42	$1.45
		1.45	$1.23	$1.26	$1.28	$1.31	$1.34	$1.36	$1.39	$1.42	$1.44

The lookup table in Section B (cells M4 through N17) establishes the appropriate currency unit range. This keeps the chart in Section C the same physical size no matter which currency you are converting.

For example, if a currency fluctuates from 80 to 149 units per U.S. dollar (which is worth 100 cents), the table uses one-unit increments (cell N10) when it establishes the x- and y- axes of the table. That is because there is an almost one to one relationship between the units comprising the two currencies. The Canadian dollar is a good example of a currency in this category.

Some currencies, by contrast, are "worth" more than the U.S. dollar. For example, last summer the Irish punt (pound) hovered around .67 punt per

My Favorite Template...

Figure 2: The Currency Conversion Spreadsheet

```
File: CANADA.GAS.94                          REVIEW/ADD/CHANGE                              Escape: Main Menu
=====A==B==C=====D=====E=====F=========G=========H=========I=========J========K=========L=========M========N=========O=========P=========Q========R=========S========T========U=
  1|
  2| A              FUEL COST CONVERSION CHART
  3|
  4| This template produces a chart that helps U.S. citizens compute the        B  .001      .002
  5| cost of a liter of gasoline in U.S. dollars.                                  .5        .01
  6|                                                                              1.5        .02
  7|                                                                              3.5        .05
  8|     Enter the NAME of the current to be entered below                        6.5         .1
  9|     (examples: YEN, or D-MARKS or CANADA $) --------------->CANADA $          13          .3
 10|                                                                              80           1
 11|     Enter a TYPICAL currency exchange rate, showing units                   150          10
 12|     (examples: 96 Yen, .73 Deutschmarks or 1.37 Canadian                   1500         100
 13|     dollars) per U.S. dollar ----------------------------->    1.37        15000        1000
 14|
 15|     Enter the average price per LITER of fuel in
 16|     the overseas currency (examples: 115 Yen, or .52
 17|     Deutschmarks, or .51 Canadian dollars) ----------------->    .51                    $.01
 18|
 19|
 20| C  INTERNATIONAL FUEL PRICES ADJUSTED TO U.S. DOLLARS PER GALLON
 21|
 22|                               CANADA $ PER LITER OF FUEL
 23|           .47     .48     .49     .50     .51     .52     .53     .54     .55
 24|         ----------------------------------------------------------------------
 25|     1.29 | $1.38   $1.41   $1.44   $1.47   $1.50   $1.53   $1.56   $1.59   $1.62
 26| E  U 1.30 | $1.37   $1.40   $1.43   $1.46   $1.49   $1.52   $1.55   $1.58   $1.61
 27| X  N 1.31 | $1.36   $1.39   $1.42   $1.45   $1.48   $1.51   $1.54   $1.57   $1.60
 28| C  I 1.32 | $1.35   $1.38   $1.41   $1.44   $1.47   $1.50   $1.53   $1.55   $1.58
 29| H  T 1.33 | $1.34   $1.37   $1.40   $1.43   $1.46   $1.49   $1.51   $1.54   $1.57
 30| A  S 1.34 | $1.33   $1.36   $1.39   $1.42   $1.45   $1.47   $1.50   $1.53   $1.56
 31| N    1.35 | $1.32   $1.35   $1.38   $1.41   $1.44   $1.46   $1.49   $1.52   $1.55
 32| G  P 1.36 | $1.31   $1.34   $1.37   $1.40   $1.42   $1.45   $1.48   $1.51   $1.54
 33| E  E 1.37 | $1.30   $1.33   $1.36   $1.39   $1.41   $1.44   $1.47   $1.50   $1.53
 34|    R 1.38 | $1.29   $1.32   $1.35   $1.38   $1.40   $1.43   $1.46   $1.49   $1.51
 35| R    1.39 | $1.28   $1.31   $1.34   $1.37   $1.39   $1.42   $1.45   $1.48   $1.50
 36| A  U. 1.40 | $1.28   $1.30   $1.33   $1.36   $1.38   $1.41   $1.44   $1.47   $1.49
 37| T  S. 1.41 | $1.27   $1.29   $1.32   $1.35   $1.37   $1.40   $1.43   $1.46   $1.48
 38| E    1.42 | $1.26   $1.28   $1.31   $1.34   $1.36   $1.39   $1.42   $1.45   $1.47
 39| S  $ 1.43 | $1.25   $1.28   $1.30   $1.33   $1.36   $1.38   $1.41   $1.43   $1.46
 40|    1.44 | $1.24   $1.27   $1.29   $1.32   $1.35   $1.37   $1.40   $1.42   $1.45
 41|    1.45 | $1.23   $1.26   $1.28   $1.31   $1.34   $1.36   $1.39   $1.42   $1.44
 42|
 43|
 44|
 45|
 ----------------------------------------------------------------------------------------------------
Type entry or use Ć commands                                                          196K Avail.
```

A Data Entry Area.

B Lookup Table.

C Conversion Chart.

Figure 3: Labels and Values

Starting Cell	Label or Value
F2	FUEL COST CONVERSION CHART
B4	This template produces a chart that helps U.S. citizens compute the
B5	cost of a liter of gasoline in U.S. dollars.
M4	.001
M5	.5
M6	1.5
M7	3.5
M8	6.5
M9	13
M10	80
M11	150
M12	1500
M13	15000
N4	.002
N5	.01
N6	.02
N7	.05
N8	.1
N9	.3
N10	1
N11	10
N12	100
N13	1000
D8*	Enter the NAME of the currency to be entered below
D9*	(examples: YEN or D-MARKS or CANADA $) ------ ------------> [Ed: Type a quotation mark before the opening parenthesis. Create the arrow by filling the cells through column J with hyphens and then typing the greater than symbol.]

Starting Cell	Label or Value
D11	Enter a TYPICAL currency exchange rate, showing units
D12	(examples: 96 Yen, .73 Deutschmarks, or 1.37 Canadian
D13	dollars) per U.S. dollar -------------------- ----------->
D15	Enter the average price per LITER of fuel in
D16	the overseas currency (examples: 115 Yen, or .52
D17	Deutschmarks, or .51 Canadian dollars) ------ --------->
G20	INTERNATIONAL FUEL PRICES ADJUSTED TO U.S. DO
L20	LLARS PER GALLON
I22*	[Ed: Type the word "COST" in this cell if you use AppleWorks 1 or 2. If you use AppleWorks 3 or 4, you will put a formula here later.]
J22	^PER LITER OF FUEL [Ed: The ^ symbol indicates a space. Type a quotation mark before pressing the Space Bar.]
E24	--- [Ed: Fill the cell with hyphens. Type a quotation mark before the first hyphen.]
E25		[Ed: Type a quotation mark and then a vertical line or "pipe" symbol.]

* AppleWorks 1.x or 2.x users should omit these entries.

U.S. dollar. In this situation, the template uses increments of .01 (cell N5) to construct the x- and y-axes in the table.

At the other end of the spectrum are currencies that are "worth" much less than the U.S. dollar. For currencies like the Mexican peso or the Italian lira, the table uses 10-unit increments (cell N11) because each U.S. dollar is equivalent to as many as 1499 of the foreign monetary units.

The template takes the exchange rate and gasoline price you enter in Section A and puts these values in the center-most row and column of the table.

That creates a table that lets you determine the cost of gasoline as the exchange rate or the price per liter fluctuates during your trip.

The formulas in cells F23 through N23 take the cost per liter of fuel and decrease or increase it by the incremental value determined by the lookup table. The formulas in cells D25 through D41 take the typical exchange rate and decrease or increase it accordingly.

Once the table's row and column headings are established, the formula (F23*3.8)/D25 in cell F25 (and its copies) converts the price of one liter of

gasoline in the foreign currency to the price per gallon in that same currency. *[Ed: There are approximately 3.8 liters in a gallon.]* The template then divides the cost by the exchange rate in cell D25 (and the series from D26 through D41).

Creating the Template

The template is easy to create and practical to use. First, you will format the layout. Follow these steps:

1. Launch AppleWorks and create a new spreadsheet called "CONV.TBL". Save the template frequently as you work.

2. Use Apple-V to set:

   "Recalculate" "Order" to "Rows",

   "Recalculate" "Frequency" to "Manual", and

   "Value format" to "Dollars" with "2" decimal places. (AppleWorks 4 users should select "Money" format and "2" decimal places.)

3. Use Apple-L to narrow columns A through C to two characters. Then use Apple-L to widen column B to three characters. *[Ed: This method saves one step compared to adjusting columns A, B, and C individually.]*

4. Use Apple-L to narrow column E to three characters.

5. Use Apple-L, select "Block", and change the "Value format" of the following cells to "Commas" with "2" decimal places: F23 through N23, D25 through D41, K13, and K17.

6. Use Apple-L, select "Block", and change the "Value format" of cells M4 through N13 to "Appropriate".

Entering Labels and Values

Now you are ready to enter the labels and some values. Follow these steps:

1. Enter the labels and values in *Figure 3*.

2. Type the label "EXCHANGE RATES" down column B in cells B26 through B39. Type one letter per cell. Leave cell B34 empty; it contains the space between the two words.

Figure 4: Formulas

Cell	Formula
N17	@LOOKUP(K13,M4...M13)
I22	(K9) *[Ed: AppleWorks 1.x and 2.x users entered a label in this cell; only AppleWorks 3.x or 4.x users should enter this formula.]*
F23	+K17-(4*N17)
G23	+K17-(3*N17)
H23	+K17-(2*N17)
I23	+K17-N17
J23	+K17
K23	+K17+N17
L23	+K17+(2*N17)
M23	+K17+(3*N17)
N23	+K17+(4*N17)
D25	+K13-(8*N17)
D26	+K13-(7*N17)
D27	+K13-(6*N17)
D28	+K13-(5*N17)
D29	+K13-(4*N17)
D30	+K13-(3*N17)
D31	+K13-(2*N17)
D32	+K13-N17
D33	+K13
D34	+K13+N17
D35	+K13+(2*N17)
D36	+K13+(3*N17)
D37	+K13+(4*N17)
D38	+K13+(5*N17)
D39	+K13+(6*N17)
D40	+K13+(7*N17)
D41	+K13+(8*N17)
F25	(F23*3.8)/D25 *[Ed: An "ERROR" message will appear in the cell until you use the template to create a conversion table.]*

3. Type the label "UNITS PER US $" down column C in cells C26 through C39. Type one letter per cell. Leave cells C31, C35, and C38 empty; they contain the spaces between the words. Type a quotation mark before entering the dollar sign.

Figure 5: After Entering Formulas

```
File: CONV.TBL              REVIEW/ADD/CHANGE              Escape: Main Menu
=====A==B=C=====D=====E=====F========G========H========I========J========K====
  22|                                                    PER LITER OF FUEL
  23|                         NA     NA     NA     NA    0.00        NA
  24|                  ------------------------------------------------------
  25|            NA|    ERROR
  26| E  U       NA|
  27| X  N       NA|
  28| C  I       NA|
  29| H  T       NA|
  30| A  S       NA|
  31| N          NA|
  32| G  P       NA|
  33| E  E     0.00 |
  34|    R       NA|
  35| R          NA|
  36| A  U.      NA|
  37| T  S.      NA|
  38| E          NA|
  39| S  $       NA|
     --------------------------------------------------------------------------
F25: (Value) (F23*3.8)/D25

Type entry or use ⌂ commands                                   200K Avail.
```

Figure 6: After You Copy the Formulas

```
File: CONV.TBL              REVIEW/ADD/CHANGE              Escape: Main Menu
=====A==B=C=====D=====E=====F========G========H========I========J========K====
  22|                                                    PER LITER OF FUEL
  23|                         NA     NA     NA     NA    0.00        NA
  24|                  ------------------------------------------------------
  25|            NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  26| E  U       NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  27| X  N       NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  28| C  I       NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  29| H  T       NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  30| A  S       NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  31| N          NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  32| G  P       NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  33| E  E     0.00 |    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  34|    R       NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  35| R          NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  36| A  U.      NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  37| T  S.      NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  38| E          NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
  39| S  $       NA|    ERROR  ERROR  ERROR  ERROR  ERROR  ERROR
     --------------------------------------------------------------------------
F25: (Value) (F23*3.8)/D25

Type entry or use ⌂ commands                                   198K Avail
```

4. Use Apple-C to copy cell E24 "Within worksheet" to cells F24 through N24. That creates the dashed line under the conversion table's column headings.

5. Use Apple-C to copy cell E25 "Within worksheet" to cells E26 through E41. That create the vertical line separating the y-axis label from the table's contents.

Entering Formulas

Next, follow these steps to enter the spreadsheet formulas:

1. Enter the formulas in *Figure 4*. "NA" and "ERROR" messages will appear in many cells until you enter data. When you complete this step your screen should look like the example in *Figure 5*.

2. Put the cursor in cell I22 and use Apple-L and "Block" to set the "Label format" to "Right justify".

3. Use Apple-C to copy cell F25 "Within worksheet" to cells G25 through N25. Choose "Relative" for the reference to cell F23 and "No change" for the reference to cell D25. The cells will display "ERROR" messages until you enter sample data later in this tutorial.

4. Use Apple-C to copy cells F25 through N25 "Within worksheet" downward into rows 26 through 41. In response to the eighteen prompts that follow, choose "No change" for the first reference in each formula (to cells in row 23) and "Relative" for the second reference in each formula (to cells in column D). Your screen should look like the example in *Figure 6*.

Protecting the Worksheet

Finally, you will protect the whole worksheet and then lower the level of protection for selected cells. Follow these steps:

1. With the cursor in cell A1, press Apple-L, choose "Block", and highlight the entire worksheet. (AppleWorks 3.x and later users can press Apple-> and Apple-9 to highlight the worksheet.) Then press the Return Key to select the complete template. Set "Protection" to allow "Nothing".

2. Use Apple-L to lower the protection of cells K13 and K17 as a "Block" to "Values only". If you use AppleWorks 1.x or 2.x, proceed to the next step. Otherwise, lower the protection of cell K9 to "Labels only".

3. Use Apple-V to set the "Recalculate" "Frequency" to "Automatic".

4. Save the template. Then use AppleWorks 4, your favorite utility, or BASIC to lock the file.

Using the Template

Now you will use the template to create a sample conversion table. Follow these steps:

1. Add the template to your AppleWorks desktop. Use Apple-N to rename the file "CANADA.GAS.94".

2. If you are using AppleWorks 3.x or 4.x, enter the name of the currency (for example, "CANADA $") in cell K9. If you use an earlier version of AppleWorks, skip this step.

3. Enter the currency exchange rate as "1.37" in cell K13. *[Ed: You can determine the current exchange rate from the financial pages of the newspaper, from on-line sources, from your bank, or from your travel agent. Your agent or a current travel book should also be able to tell you the approximate cost of gasoline in the country you plan to visit.]*

4. Enter the price of a liter of gasoline as ".51" in cell K17.

5. Scroll to Section C of the template. Your results should match those in *Figure 1*.

Printing the Table

After testing the template with the sample data, follow these steps to print the conversion table:

1. Use Apple-O to access "Printer Options". Set left and right margins to "1-inch" and make the characters-per-inch setting "16" or "17". *[Ed: The number you type will depend on the type of compressed print your printer supports.]* Type "PH" to tell AppleWorks not to print the page header.

2. If you use AppleWorks 3.x or later, put the cursor in cell B20, press Apple-P, and choose "Block". Press Apple-> and Apple-9 to highlight the conversion table. AppleWorks 1.x and 2.x users should highlight cells B20 through N41.

The printed table is about 4-inches high by 6-inches wide. You can cut out the table and glue it onto a 4 x 6 index card to make it sturdier.

Conclusion

This month's template creates a gasoline cost conversion chart that can help you determine the cost of gasoline outside the United States. The template can also serve as a model for other two-variable conversions. This handy document may not be as vital as a passport, traveler's checks, or a credit card, but you probably shouldn't leave home without it. ▦

[Stan Hecker is on the administrative staff at Michigan State University, East Lansing, Michigan, and is a partner in H&H Consulting, a Michigan partnership specializing in school district finance and population studies.]

*[Ed: A working copy of the gasoline cost conversion template appears on this month's **NAUG on Disk** which costs $10 from **NAUG**. **NAUG on Disk** requires a 3.5-inch disk drive; the template requires AppleWorks 3.0 or later.]*

The **National AppleWorks Users Group** (NAUG) is an association dedicated to supporting AppleWorks users. **NAUG** provides technical support and information about AppleWorks and enhancements to that program. Our primary means of communicating with members is through the monthly newsletter entitled the **AppleWorks Forum**.

How to Make Pop-up Greeting Cards with AppleWorks

by Cynthia E. Field

This article is part of a series that describes creative projects you can produce with Apple-Works and TimeOut SuperFonts. This month you will learn how to make greeting cards that contain pop-up graphics. The author assumes that you know how to use AppleWorks, Time-Out Paint, and SuperFonts.

If you're like me, you enjoy sending greeting cards to help your family and friends celebrate their special occasions. But finding the right card is often difficult. And attractive cards can cost $2 or more.

Fortunately, you do not need special software or lots of skill to create your own personalized cards. This article shows you how easy it is to create attractive cards with AppleWorks, TimeOut Paint, and SuperFonts.

Although your creations will never match the quality of their commercial cousins, you can personalize your cards by including the recipient's name on the front of the card and by using illustrations that represent the recipient's favorite hobby or interest. If you have a talent with words, you can write your own verse or humorous saying for the inside of the card. And you can even make a graphic surprise that pops-up when you open the card.

Overview

Creating pop-up greeting cards like the sample in *Figure 1* is easier than you might think. You begin by designing three AppleWorks word processor templates for the front, inside, and pop-up portion of the card. Then you print each card panel with SuperFonts.

What You Need

You need the following supplies and software to complete this project:

*   Media for coloring the cards (See "How to Make Holiday Mugs with AppleWorks", *AppleWorks Forum*, December 1994, for coloring ideas.)

Figure 1: Sample Greeting Card

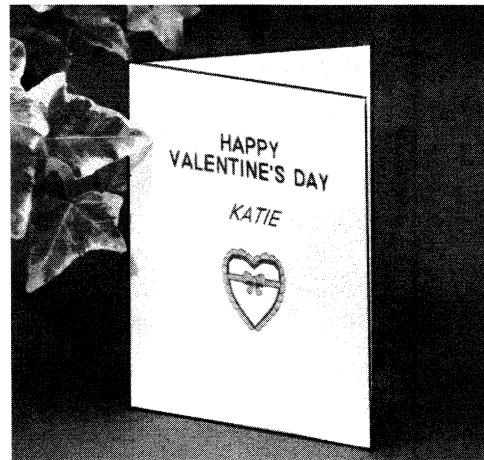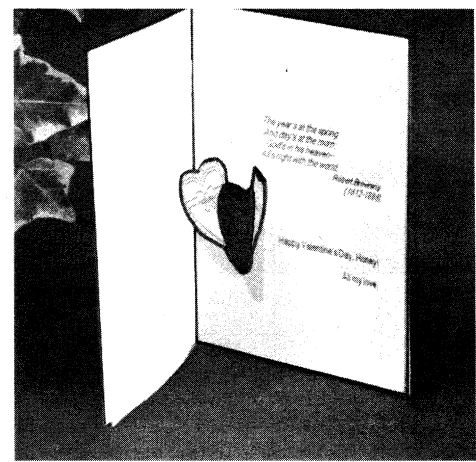**Figure 1A: Outside of Card**

Figure 1B: Inside of Card

SuperFonts Projects...

- Scissors, ruler, and glue.
- AppleWorks 2.0 or later.
- TimeOut SuperFonts.
- TimeOut Paint.
- Publish It! clip-art or any other double high-resolution clip-art.

Visualizing the Card

Each AppleWorks greeting card begins with a standard 8.5-inch by 11-inch piece of paper. You can use colored paper for your final output, but use standard white paper for this tutorial. After you print the design, you will fold the paper in half horizontally. Then, with the folded edge at the top, you will fold the page in half vertically (see *Figure 2*).

To practice, fold a blank sheet of paper as depicted in *Figure 2* and sketch some ideas for your card. When you unfold the paper, you will see the orientation of the four panels. The top-left panel is the front of your card. The bottom-right panel is the inside message area. The top-right panel is the back of the card, and the lower-left panel is the left-hand panel inside the card. *[Ed: The author shows you how to create the front and inside message panels in this article. You can easily add text and graphics to the inner panel and the back of the card.]*

Creating the Card Front

As you can see from *Figure 1*, the front of the card will feature a large greeting, the recipient's name, and an illustration. Follow these steps to prepare your graphic for the front panel:

1. Launch AppleWorks and create a new word processor file named "CARD.FRONT". Save the template frequently as you work.

2. Press Apple-Escape and select "Paint" to launch TimeOut Paint.

3. Select "Open" from the File Menu. *[Ed: Directions for using TimeOut Paint appeared in last month's SuperFonts Projects article.]*

4. Navigate to the file that contains the graphic. (If you are using the Publish It! graphics, navigate to the RABBIT file and open it.) Write down the complete path to the Valentine's heart graphic.

Figure 2: How to Fold the Card
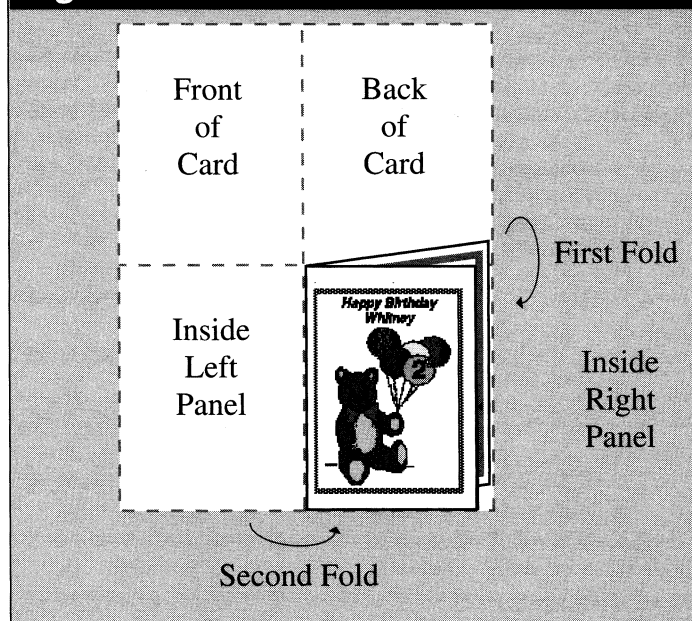
5. Choose "Coordinates" from the Goodies Menu.

6. Imagine a picture frame surrounding the heart graphic. Move the cursor to the lower right-hand corner of the imaginary frame and write down the coordinates, which should be approximately "200,95". The Menu Bar obstructs the top part of the heart graphic, but you can assume the coordinates for the upper left-hand corner are "0,0".

7. Quit TimeOut Paint and return to AppleWorks. Click on "No" if Paint asks if you want to save your changes to the graphics file.

Now you are ready to create the template for the front of the card. You will print this panel on the lower right-hand corner of the page. (Later you will turn the page 180 degrees so the front panel is in the upper left-hand corner of the page in *Figure 2*.) Follow these steps:

1. Insert a SuperFonts Load Font command at the beginning of the document. Use *Figure 3* as a guide. Remember that the Load Font command must be the first line in the document. For best results, choose a large font such as Helvetica.24.

   If you use AppleWorks 2.x or 4.x, you must type the Load Font command manually. Include the complete pathname to the font.

SuperFonts Projects...

```
┌─────────────────────────────────────────────────────────────┐
│ Figure 3: SuperFonts Setup for Front of Card                  │
├─────────────────────────────────────────────────────────────┤
│ File: Card.Front            REVIEW/ADD/CHANGE      Escape: Main Menu │
│ =====<====<====<====<====<====<====<====<====<====<====<====<====<====<====<===│
│ <1=/CEFE1/APPLEWORKS.3.0/FONTS/HELVETICA.24>▒                  │
│ <p1=/cefe2/publish.it.4/rabbit>▒                              │
│ --------Top Margin:  6.5 inches                               │
│ --------Bottom Margin:  0.0 inches                            │
│ --------Right Margin:  0.2 inches                             │
│ --------Left Margin:  4.6 inches                              │
│ --------Centered                                              │
│                                    <1><ob>HAPPY▒              │
│                               VALENTINE'S  DAY<oe>▒           │
│                        ▒                                      │
│                                    <ib>KATIE<ie>▒            │
│                        ▒                                      │
│                               <p1,00,00,200,95>▒             │
│                                                              │
│ ------------------------------------------------------------ │
│ Type entry or use Ɔ commands      Line 1  Column  1      11/21/94  5:17 │
└─────────────────────────────────────────────────────────────┘
```

Figure 3: SuperFonts Setup for Front of Card

of the line instructs SuperFonts to turn off outline style.

7. On line 11, use the `<ib>` command to turn on italics and then type the recipient's name. End the line by typing an `<ie>` (italics end) command. Press the Return Key twice. Use *Figure 3* as a guide.

8. On line 13, type the Put Picture command in *Figure 3* and press the Return Key. This command specifies the coordinates of the heart graphic and tells SuperFonts to use only that portion of the Publish It! RABBIT file.

9. Save your work.

If you use AppleWorks 3.0, press Apple-Escape and use PickFonts to enter the appropriate command and path automatically in the CARD.FRONT template.

2. Move the cursor to line 2 and type the Load Picture command (see line 2 in *Figure 3*). Change the text to specify the complete path to the RABBIT file (or the graphic you chose for your card). Then press the Return Key.

3. On line 3, press Apple-O and set the top margin to 6.5 inches, the bottom margin to 0.0 inches, the right margin to 0.2 inches, and the left margin to 4.6 inches. That will print the card in the lower right-hand corner of the page.

4. Issue a Center Command.

The printer options will appear on lines 3 through 7 in your template. Press Apple-Z to view the settings (see *Figure 3*).

5. On line 8, type `<1><ob>HAPPY` and press the Return Key. The "<1>" and "<ob>" commands tell SuperFonts to use the Helvetica.24 font (or any other font that you specified on line 1) and to print in outline style.

6. On line 9, type `VALENTINE'S  DAY<oe>` and press the Return Key twice. For improved readability, enter two spaces between "VALENTINE'S" and "DAY". The "<oe>" command at the end

10. Line up the top of your paper with the print head on your printer. Then launch SuperFonts and print your document in high quality mode. The printer will print the card's front on the lower right-hand quadrant of the page. *[Ed: The placement of the text and graphics on the corner of the page does not let you preview the complete image on the SuperFonts screen.]*

11. Fold the paper in half horizontally, keeping the printed area of the card facing you. Then fold it in half vertically (see *Figure 2*). The text and graphics on the front of the card should face you.

12. Correct any mistakes, save the template, and print five copies of the page.

Creating the Inside Panel

Now you will create the inside panel. Since you will turn the page around in the printer, you will once again be printing in the lower right-hand corner of the page. As a result, you can use all the formatting commands you entered for the CARD.FRONT template.

Follow these steps to convert the CARD.FRONT template so it prints the inside panel:

1. Use Apple-N and Apple-Y to rename "CARD.FRONT" to "CARD.INSIDE".

2. On line 1, change the font size to "Helvetica.12".

3. Use Apple-D to delete line 2, the line with the Load Picture command.

4. Copy line 1 "Within document" to line 2. Change the font number to "2" at the beginning of the line. Change the font size to "10" at the end of the line.

I selected the Helvetica.12 and Helvetica.10 fonts because they are so readable. Remember that the Load Font commands must be the first lines in the document.

5. Confirm that lines 3 through 7 contain the settings in *Figure 4*.

6. Delete lines 8 through 13. These are remnants of the CARD.FRONT template. You will enter the card's inside message instead.

7. Use the Down Arrow Key to move the cursor to line 12 and type `<1><ib>The year's at the spring` and press the Return Key. This is the first part of a verse by the poet Robert Browning. The "`<ib>`" command tells SuperFonts to italicize the poem.

8. Continue typing the poem on lines 13, 14, and 15 (see *Figure 4*). Press the Return Key to move to line 16.

9. On line 16, use Apple-O to set the format to "Right Justified".

10. On line 17, enter `<2>...Robert Browning` and press the Return Key. Enter Browning's birth and death dates and the "end italics" command on line 18. Press the Return Key six times to move the cursor to line 24.

11. On line 24, type `<1>Happy Valentine's Day, Honey!`. Press the Return Key twice.

12. On line 26, type `All my love,` and press the Return Key.

13. Save your work.

Now you are ready to print this panel on one of the pages you printed earlier. Continue as follows:

Figure 4: SuperFonts Setup for Inside of Card

```
File: Card.Inside           REVIEW/ADD/CHANGE            Escape: Main Menu
=====<====<====<====<====<====<====<====<====<====<====<====<====<====<===
<1=/CEFE1/APPLEWORKS.3.0/FONTS/HELVETICA.12>
<2=/CEFE1/APPLEWORKS.3.0/FONTS/Helvetica.10>
--------Top Margin:  6.5 inches
--------Bottom Margin:  0.0 inches
--------Right Margin:  0.2 inches
--------Left Margin:  4.6 inches
--------Centered

                                 <1><ib>The year's at the spring
                                     And day's at the morn;
                                     God's in his heaven--
                                     All's right with the world.
--------Right Justified
                                          <2>...Robert Browning
                                             (1812-1889)<ie>



                                 <1>Happy Valentine's Day, Honey!

                                             All my love,

---------------------------------------------------------------------------
Type entry or use ⌘ commands        Line 1  Column  1        11/21/94  5:18
```

14. Hold one of the card printouts so the front of the card is in the upper left-hand quadrant. Insert the paper so it lines up with the print head on your printer and will print on the same side of the paper as the front of the card.

15. Launch SuperFonts and print the card in high quality mode. Your printer will print the card's inside panel on the lower right-hand quadrant of the paper.

16. Fold the card as depicted in *Figure 2* and correct any mistakes. Save and re-print the template.

Creating the Pop-up Graphic

Now you can add a "surprise" pop-up graphic. When the recipient opens the card, the graphic will stick out from the card, creating a three-dimensional effect. Create the pop-up graphic by following these steps:

1. Start a new word processor file from scratch. Name the file "POP.UPS".

Figure 5: SuperFonts Setup for Pop-up Graphic

```
File: Pop.Ups              REVIEW/ADD/CHANGE              Escape: Main Menu
=====<====<====<====<====<====<====<====<====<====<====<====<====<====<===
<p1=/cefe2/publish.it.4/rabbit>
<p1,00,00,200,95>
<p1,00,00,200,95>
<p1,00,00,200,95>




------------------------------------------------------------------------
Type entry or use Ó commands       Line 1  Column  1       11/21/94  5:19
```
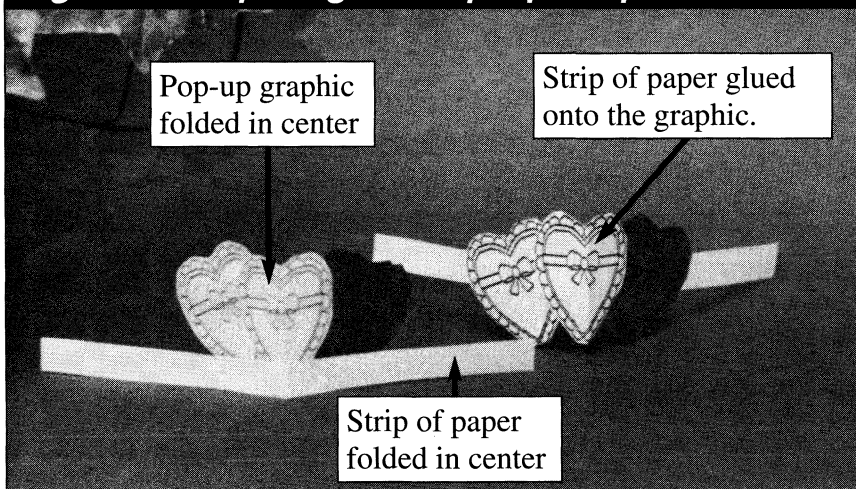
Figure 6: Preparing the Pop-Up Graphic

Pop-up graphic folded in center

Strip of paper glued onto the graphic.
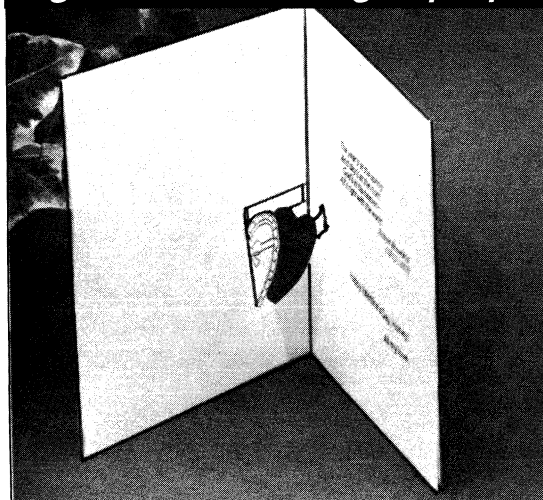
Strip of paper folded in center

Figure 7: Positioning Pop-Up

2. Use TimeOut Paint to choose a suitable double high-resolution graphic and use the procedures described earlier in this article to identify the coordinates and pathname to the graphic.

The graphic should be at least 1-inch high. You can glue two or three copies of a small graphic together to make a larger one. (This is the method I used for the card in *Figure 1B*.) Another option is to enlarge the printed graphic at a quick print shop.

3. On line 1 of the POP.UPS file, enter the Load Picture command and the complete path to the graphic (see *Figure 5*).

4. On line 2, type the Put Picture command and the graphics coordinates.

5. Copy line 2 "To clipboard" and copy "From clipboard" into lines 3 and 4. That will print three copies of the clip-art on the page so you have extra copies to work with. The finished template should match the example in *Figure 5*.

6. Use SuperFonts to print the POP. UPS file on white or colored paper.

Now you are ready to add dimensionality to your printout. Continue as follows:

7. Cut out the pop-up and fold it in half vertically (see *Figure 6*).

8. Line up the fold on the graphic with the inside fold of the greeting card to make sure the pop-up will not interfere with the message inside the card.

9. Cut a narrow strip of paper that is twice as long as the width of the pop-up (see *Figure 6*).

10. Glue the middle of the strip to the back of the graphic (see *Figure 6*). The remaining tab at each end should be one-half the width of the graphic.

11. Position the pop-up inside the card and glue the tabs so they meet at the centerfold of the card (see *Figure 7*). Allow the glue to dry completely.

SuperFonts Projects...

Working with AppleWorks GS

The graphical and What-You-See-Is-What-You-Get capabilities of AppleWorks GS make the program's graphics and page layout modules ideal for creating your cards. But the procedures you follow are more mouse-and-screen oriented than those you use with 8-bit programs like AppleWorks.

With AppleWorks GS, you create a document that prints the card in a single pass through your printer. As you can see from *Figure A*, you put the front of the card upside down in the upper left-hand corner of a page you create with the AppleWorks GS page layout module. The inside panel goes in the lower right-hand corner of the page.

The Front Panel

Follow these steps to create the front of the card *[Ed: You create this panel in a graphics document because you have to invert the image to print upside down on the page.]:*

1. Create a new graphics document.

2. Select "Import File" from the Edit Menu and import the graphic(s) you want to use on the cover.

3. Use AppleWorks GS's graphic and text tools to create the front of the card.

4. When you are done, choose "Select All" from the Edit Menu and choose "Group" from the Arrange Menu to group all the elements into a single object. Then choose "Flip Vertical" from the Arrange Menu to invert all the elements in the panel.

5. Press Apple-C to copy the panel to the clipboard, create a new page layout document, and paste the front panel onto the page. Use the Arrow Tool to move the panel into position 1/4-inch from the top and left edge of the page.

Figure A: Card Ready to Print in AWGS
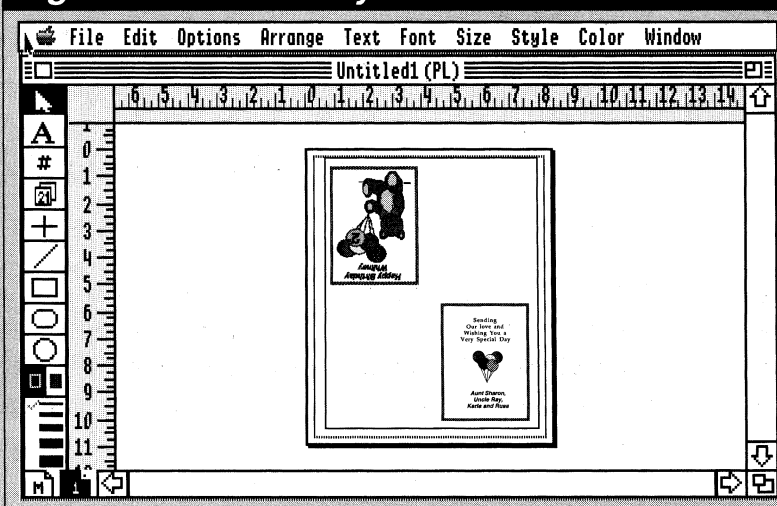
The Inside Panel

You do not have to "flip" the inside panels of the card, so you should create those panels in the page layout document. Use the drawing and text tools to produce these panels.

Finally, use the page layout rulers to move the objects into their final positions on the page. Select "Fit in Window" from the Options Menu to preview your work on the screen (see *Figure A*). Then save the file, print, and fold the card.

AppleWorks GS supports landscape printing, so you can also make cards that fold along the vertical axis first and the horizontal axis second. The resulting cards are wider than they are tall and are ideal for landscapes and more formal presentations. Remember to select landscape orientation in the "Page Setup..." dialog (File Menu) before you design these cards.

12. Gently pull the pop-up toward you. It should fold neatly inside the card when you close the card and pop-up when you open the card.

Conclusion

Pop-up greeting cards are fun to make, are more personal that commercial cards, and can save you money. There is nothing like a truly personal card to evoke a warm smile. And nothing better than a personal greeting that holds a special surprise inside!

*[Dr. Cynthia E. Field has been doing things that can't be done on Apple II computers since 1982. She was the author of inCider/A+'s popular "Press Room" column and is the Contributing Editor of the **AppleWorks Forum**.]*

*[Ed: Working copies of the CARD.FRONT, CARD.INSIDE, and POP.UPS templates appear on this month's issue of **NAUG on Disk**, which costs $10 from **NAUG**. The templates require Apple-Works 2.0 or later enhanced with TimeOut Super-Fonts. **NAUG on Disk** requires a 3.5-inch drive.]*

Developers and Vendors Who Support Your Apple II

by A2.Lunatic and Cathleen Merritt

Here is a list of companies and vendors who offer products and support for your Apple II computer. The list was prepared by "A2.Lunatic" for the GEnie on-line information service with supplementary data provided by **NAUG**. You can contact any of the companies in this list by Internet mail. Just add "@genie.geis.com" to the GEnie e-mail address in this list. Please notify **NAUG** of any additions or corrections to this list.

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Alliance International	A2: 5	B.MAPLES	502-491-6828		
Alltech Electronics	A2: 46	T.DIAZ	818-724-2402	995-7773	619-724-8808
Apple Customer Assistance			408-974-1010	776-2333	
Apple Library (ALUG)			408-974-3258		408-725-8502
Apple Resource Center				753-0114	209-832-3270
Apple User Group Info Line				538-9696 ext. 500	
Arminius Publications			609-662-3420		
Balloons Software	A2: 13	P.SHAPIRO1	202-244-2223		
B&D Computer Repair			312-735-9010		
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HyperStudio Network			609-466-3196		
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Lost Classics	A2: 7	A2.TIM	310-813-5697		
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Micol System	A2Pro: 9	MICOL.SYSTEM	416-495-6864		
Microcycles (Zip Accelerators)			310-202-8337		
Morgan Davis Group	A2: 27	MORGAN-DAVIS	619-670-0563		
NAUG	A2: 17	NAUG	313-454-1115		313-454-1965
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Shreve Systems			318-424-7987	227-3971	
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